

CLAIMS:

1. A microelectronic assembly comprising:
  - a first microelectronic element having a contact bearing face and one or more contacts provided at the contact bearing face;
  - a second microelectronic element juxtaposed with said first microelectronic element, said second microelectronic element having a first surface including one or more conductive pads;
  - one or more conductive masses electrically interconnecting the contacts of said first microelectronic element and the conductive pads of said second microelectronic element, wherein each said conductive mass includes a first region comprising a first fusible material transformable from a solid to a liquid at a first melting temperature and a second region comprising a second fusible material transformable from a solid to a liquid at a second melting temperature that is less than the first melting temperature.
2. The microelectronic assembly of claim 1, further comprising substantially S-shaped leads having tip ends that are electrically connected to the contacts of said first microelectronic element and terminal ends that are permanently attached to the conductive pads of said second microelectronic element.
3. The microelectronic assembly as claimed in claim 1, wherein the first region of each said conductive mass includes a conductive bump attached to one of the contacts of said first microelectronic element.
4. The microelectronic assembly as claimed in claim 3, wherein the second region of each said conductive mass includes a layer of a fusible conductive material interposed between one of the conductive bumps of said first microelectronic element and one of the conductive pads of said second microelectronic element.
5. The microelectronic assembly as claimed in claim 1, wherein said first microelectronic element is

selected from the group consisting of a semiconductor chip, a semiconductor wafer, a semiconductor chip package having a dielectric element attached to a chip, a circuit board, a dielectric sheet, a circuit panel, a connection component, an interposer, a substrate and a dielectric substrate.

6. The microelectronic assembly as claimed in claim 1, wherein said second microelectronic assembly is selected from the group consisting of a semiconductor chip, a semiconductor wafer, a semiconductor chip package having a dielectric element attached to a chip, a circuit board, a dielectric sheet, a circuit panel, a connection component, an interposer, a substrate and a dielectric substrate.

7. The microelectronic assembly as claimed in claim 1, wherein said first microelectronic element includes a semiconductor wafer comprising a plurality of semiconductor chips, said wafer being severable for providing individual packages comprising one or more of said semiconductor chips electrically interconnected with at least a region of said second microelectronic element.

8. The microelectronic assembly as claimed in claim 1, further comprising an array of flexible leads extending between and electrically interconnecting said first and second microelectronic elements.